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ABSTRACT

This report presents the key findings and recommendations of the Advisory Panel for the Head Start Evaluation Design Project. The principal audiences for the report are: (1) leadership and staff of the Administration for Children, Youth, and Families (ACYF) who have administrative responsibility for Head Start; and (2) local Head Start programs. Section 1 discusses eight recommendations for an overall strategy and general principles. Section 2 presents recommended research directions considered important for building a knowledge base. Section 3 offers the panel's recommendations for research support activities that are needed to create an infrastructure for Head Start research and evaluation. A variety of groups are encouraged to collaborate with ACYF by supporting Head Start studies or by launching parallel research and evaluation initiatives. Foundations, research institutes, universities, state and local education agencies, the Department of Education, local child development and early childhood education programs, and policymakers may find the report useful for framing research issues and approaches. (RH)

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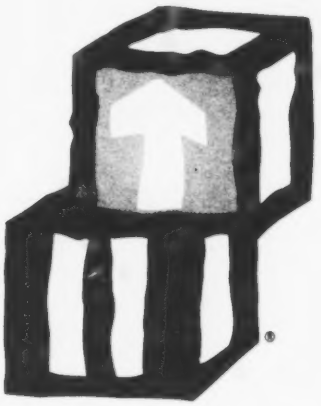
Head Start Research And Evaluation:

A Blueprint for the Future

Recommendations of the Advisory Panel for the Head Start Evaluation Design Project



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HEAD START RESEARCH AND EVALUATION: *A Blueprint for the Future*

Recommendations of the Advisory Panel for the Head Start Evaluation Design Project

September 1990

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HEAD START RESEARCH AND EVALUATION:
A Blueprint for the Future

Recommendations of the Advisory Panel for the Head Start Evaluation Design Project

INTRODUCTION

Project Head Start is widely viewed as one of the nation's most successful social policy initiatives. It began with great optimism in 1965 as a summer child development program for children of low income families, and soon became a beacon of hope for these children and their families. Now 25 years old, Head Start has matured into a comprehensive and multifaceted full year intervention supporting and enhancing the capacities of children, families, and communities.

With a national commitment to reach all eligible children, Head Start is poised for a major program expansion. This commitment is particularly salient in light of the national educational goal, established jointly by President George Bush and the National Governors' Association, that all children shall enter school ready to learn. A strong and expanded Head Start is critical to meeting that goal and to advancing America's twin aims of excellence and equity.

Past research has demonstrated that quality programs for young children and their families can significantly improve their life course. Yet too little is known about the extent to which and by what means Head Start maximizes the potential of different types of children and families, and how future public policy can chart a course toward that end. More specific research on children and families is needed to answer these questions.

The Advisory Panel for the Head Start Evaluation Design Project

This report presents the key findings and recommendations of the Advisory Panel for the Head Start Evaluation Design Project. The Panel was convened within the framework of a contract of Collins Management Consulting, Inc., with the Head Start Bureau of the Administration for Children, Youth, and Families (ACYF), Office of Human Development Services, Department of Health and Human Services. The Panel comprised nationally recognized experts knowledgeable in one or more of the following areas: Head Start and other early intervention programs, research design, methodology, measurement, and policy analysis. The Panel members, who included representatives of various racial and ethnic groups, met as a group four times in the process of developing this report (December 1989, February 1990, April 1990, and June 1990). Selected Federal staff of the Department of Health and Human Services and the Department of Education also attended these meetings. A list of Panel members and their affiliations is included at the end of this report.

The Panel presented the first opportunity in more than a decade and a half for a systematic analysis of research needs relevant to the future of Head Start. The group addressed past research and evaluation findings (including the evidence of the lasting effects of early intervention produced by research-oriented preschool programs), Head Start's information

needs, and ACYF's emerging strategy for expanding enrollment, upgrading quality, and introducing program changes.

The Panel's initial charge was to recommend a series of options for the evaluation of the Head Start program. However, it soon became apparent that rather than recommending specific studies or design alternatives, the Panel should focus on defining an overall strategy and a set of guiding principles for the selection and conduct of future Head Start research and evaluation efforts. The Panel strongly believes that to reach the nation's goals for Head Start, an integrated program of research and the establishment of a research infrastructure to support such efforts must be emphasized. This paper presents the Panel's consensus on a research blueprint for the future.

Intended Audience

Recognizing that there is widespread interest in the Head Start program and in other early intervention programs that focus on the needs of young children in low income families, the Panel's report is addressed to several audiences. The principal audience is ACYF leadership and staff who have administrative responsibility for Head Start, including research and evaluation, and local Head Start programs. However, a wide range of groups are encouraged to collaborate with ACYF by supporting Head Start studies or by launching parallel research and evaluation initiatives. Accordingly, foundations, research institutes, universities, state and local education agencies, the Department of Education, local child development and early childhood education programs, and policymakers might find the Panel's report useful in framing research issues and approaches.

The Panel's Recommendations

The Panel's recommendations are included in three sections of the report. First, the eight recommendations for an **overall strategy and general principles** are presented and discussed. These are followed by **recommended research directions** that are important for building a future knowledge base. The report concludes with the Panel's recommendations for **research support activities** that are needed to create an infrastructure for Head Start research and evaluation.

OVERALL STRATEGY AND GENERAL PRINCIPLES

Future Head Start research and evaluation efforts should be guided by a clearly defined overall strategy and general principles. This section presents and discusses the eight principles formulated by the Panel.

1. **Head Start research and evaluation planning should be organized around two principal questions:**

   - **Which Head Start practices maximize benefits for children and families with different characteristics under what types of circumstances?**

   - **How are gains sustained for children and families after the Head Start experience?**

Research initiatives designed to answer these questions offer high promise of producing information that will lead to continuing improvements in the quality of Head Start and other early childhood programs. Moreover, careful consideration of these pivotal questions will help ACYF identify Head Start factors and post-Head Start experiences that extend or attenuate the positive effects of the Head Start program.

The nature of these two principal questions defines a new generation of research and evaluation which differs significantly from past studies. First, they require much finer grained analyses, particularly with respect to independent variables. Second, they require information specific to various subgroups of the Head Start population. Third, they recognize the contribution of the knowledge of context to the interpretation of data. Fourth, they acknowledge family functioning, both as a goal in itself and its importance in the mediation of the child's development. Each of these research and evaluation implications will be discussed further in this report.

2. **An overall research strategy rather than a single large scale study is the appropriate framework for addressing critical Head Start research and evaluation questions.**

The Panel recommends strongly against a single large scale study of Head Start as the principal mechanism for seeking answers to the pivotal research questions highlighted above. The methodological requirements for the new generation of research and evaluation issues do not lend themselves to large scale evaluations that treat Head Start as a single program. Head Start is not, in any simple sense, a uniform "treatment." The common denominator of Head Start programs nationwide is conformity to a set of regulatory performance standards that reflect comprehensive service requirements in education, parent involvement, social services, and health services. But programs are allowed and encouraged broad flexibility in how they deliver the required component services. Moreover, Head Start programs serve children in different regions and subeconomies of American society. They serve a number of minority groups and address issues of bilingualism and multiculturalism. They embody a variety of programmatic formulas and inventions created by local Head Start staff to respond to the unique needs of families in their communities.

An overall strategy is needed to extend existing theory and state-of-the-art research methods and to provide a more comprehensive and in-depth knowledge base for improving the quality of services provided to children and families. The Panel proposes three key approaches to guide this new strategy. These are implementation of an integrated set of studies, use of diverse methodologies and identification of marker variables.

Implementation of an Integrated and Coordinated Set of Research and Evaluation Studies Collectively Designed to Address the Major Questions.

An advantage of multiple studies, as opposed to a single large project, is the capacity for a cluster of studies to complement one another at a single point in time and to build upon one another in incremental stages over time. A further advantage is the ability to cross-validate findings using different methodologies and to test the hypotheses with different subgroups of programs and participants.

The research and evaluation studies should be designed to yield results that are interpretable for specific subgroups of children and/or families and for specific localities. These findings, taken as a whole, could address the major questions of interest. In addition, the studies should be designed and conducted by a consortium of investigators who would contribute a number of different perspectives and areas of expertise to the effort. Such an arrangement permits much more control over the quality of the data than is possible in large scale studies that are under the direction of an individual investigator or contracting firm.

The necessity for an integrated and coordinated set of studies cannot be overemphasized. Although a large number of studies of Head Start were conducted over the past 25 years (particularly in the first dozen years of the program's existence), what exists is a fractionated accumulation of studies that do not build upon one another. These efforts have yielded relatively little in the way of an organized body of knowledge. Head Start research and evaluation, in general, has not been based upon well formulated program and policy questions.

Use of Diverse Methodologies

The need for different research designs depends on the state of knowledge and the particular issues being explored. The proposed strategy draws upon diverse methodologies including case, ethnographic, correlational, quasi-experimental, and experimental studies. The common denominator of these various designs should be an overall conceptual framework guided by the principal questions.

Correlational and quasi-experimental studies could be used to test hypothetical causal models, models of "What works best for whom?" and of factors conducive to the maintenance of gains. Such studies could also identify variables that suggest causal influences or "active ingredients." Experiments could be designed to test these hypotheses through treatment manipulations or modifications, or additions to existing Head Start programs in randomized trials. This is one example of how a particular issue could be pursued through several stages of inquiry. There are many variations on this theme depending on the particular questions to be explored and the available research and evaluation resources.

It is important to note that, in the view of the Panel, randomized studies designed to compare the effects of Head Start against the effects of nonparticipation ("treatment vs. no treatment") are generally no longer viable options. First, as ACYF progresses toward the

Administration's goal of universal services for all eligible children, the potential for withholding services to form a control group, already difficult for ethical and practical reasons, will cease to be an option. Second, in view of the expansion of state and public school preschool programs and developmental child care, it is unrealistic to expect to find in most communities a representative group of "untreated" eligible children, even if Head Start services are not provided.

There are a variety of ways to respond to these and other constraints on experimental options posed by changing societal realities. One approach would be to use random assignment at the level of individual Head Start programs, centers, classrooms, or groups of home visitors to test various experimental "add ons." The control comparison would be an individual Head Start program (or unit or units) from the same subpopulation that did not receive the "add ons."

Case and ethnographic studies have played an increasingly important role in social science methodology. First, they are particularly helpful for hypothesis formulation. Second, knowledge of how programs actually operate, why something works or does not work, why some strategies work for children and families with a particular set of characteristics and not for others and the conditions under which they work are best informed by qualitative methodologies. Quantitative research does not replace qualitative knowledge, but instead builds upon it and requires it for valid interpretation. Both quantitative and qualitative research must conform to appropriate scientific criteria for assembling and analyzing evidence in order to insure the validity, reliability, and replicability of the findings.

In the past, one of the detriments to the use of qualitative methods has been the high cost of the methodology. However, if high quality research is to be conducted to respond to the critical issues in Head Start, then future Head Start studies must use both qualitative and quantitative methods in a complementary fashion.

Identification of Marker Variables

Another necessary condition for an integrated and coordinated set of studies is the identification of a set of *marker variables* for child functioning, family functioning, program characteristics, and community characteristics. These core variables will make it possible to tie separate studies together. Identification of marker variables should take place early in the implementation of the next series of Head Start studies, either as an integral part of the initial studies or as a separate activity. Additional variables would be added to particular studies, depending on the specific questions under investigation. Marker variables should be sensitive to racial, ethnic, linguistic, and cultural diversity among Head Start subpopulations.

In summary, the Panel recommends a strategy that involves an integrated set of small scale studies involving different methodologies, different subgroups of the Head Start population and multiple investigators. However, use of small scale studies does not mean that findings and policy decisions will be based on small samples. Nor does this mean that these studies would be simple in design. Rather, the recommended strategy will facilitate the convergence of results from multiple sources that will collectively incorporate robust findings from sophisticated designs. Thus the study outcomes will say something meaningful about the impact on subgroups of program participants.

3. The diversity of Head Start children and families as well as the diversity of the communities in which they reside must be recognized explicitly in future evaluation and research.

Head Start families and children are not all alike. The problems faced by an African-American child growing up in an inner city neighborhood are only broadly like those of a Native American child on an Indian reservation, a child growing up in a depressed area of Appalachia, or a Spanish-speaking child in the migrant stream. It is essential that future research and evaluation on the efficacy of Head Start address the program effects for these diverse populations.

Specific populations can be defined by such factors as presence and type of child disabilities, children's health status (including lingering effects of parental substance abuse), family composition and functioning, racial and ethnic status, linguistic differences, geographic area of residence, and other variables (or combinations of variables) that encompass the wide diversity of such subgroups.

The community attributes that may be relevant to program and policy development include the characteristics of neighborhoods in which the children reside (for example, inner city, rural, suburban, or migrant; areas of concentrated poverty and social dislocation; areas with minimal health, education, and social services; and degree of homogeneity/heterogeneity in the population).

Previous research on early childhood programs has to some degree taken subpopulations into account by further subdivision of their original sample at the time of analysis. However, the important subpopulation issues have not been addressed. Subpopulation issues must be considered and incorporated into the initial design of all future studies.

The fundamental reason for considering subgroup populations from the outset of research planning is the likelihood that modifications in site selection, in the selection of independent and dependent variables, and in instrumentation may prove necessary to take into account specific subgroups. If a proper foundation is not laid at the research design phase, it will be difficult, and sometimes impossible, to rectify the situation during analysis.

For example, readiness to learn is a reasonable objective for Head Start children. To attain Head Start's goal of social competence, program staff must facilitate the child's learning in developmentally appropriate ways and enhance future prospects for success in formal schooling. However, this objective may need to be redefined, sometimes radically, for children with certain disabling conditions or for children whose dominant language is other than English. Each subgroup with disabilities or with language differences can benefit from participation in Head Start. However, the expected outcomes (dependent variables) may differ, with implications for measurement selection and data collection techniques. Such subgroup considerations are particularly salient in addressing the question "What works best for whom?"

4. Evaluation research must explicitly address diverse outcome indices related to children, families, communities and institutions.

Historically, Head Start has embraced multiple goals affecting children, families, and other institutions and conditions within the local community. Yet in the past, studies of Head Start have overwhelmingly focused on child outcomes, particularly outcomes in the cognitive and language domains. Little attention has been given to child outcomes in the

domains of socioemotional and physical development. Even less emphasis has been devoted to the impact on families, other institutions, and the community ecology.

Child outcomes should remain a central thrust of Head Start studies. However, the focus of future Head Start research and evaluation efforts should be widened to include a broader array of child outcomes and to encompass outcomes for families, communities, and institutions.

Head Start is a *two generation program* that, in addition to the social competence goals for children, addresses goals for parents and other family members as priority outcomes in their own right. For example, Head Start's initiatives in the areas of family literacy, job training, and family support incorporate objectives of parental educational attainment, employability, and family self-sufficiency. ACYF's research agenda should give high priority to issues of family functioning, parent involvement in their children's development, family support, and family variables as mediating influences on child functioning.

Examples of salient family outcomes of a Head Start experience include:

- improved parenting skills;
- increased parent-child interaction to promote child development and learning and to strengthen the family system;
- improved expectations for children's future success in school;
- increased parent involvement in schools and other community institutions;
- reduced risk factors associated with family stress, including family violence, child abuse and neglect and substance abuse;
- reduced dependence on welfare and heightened parental skills related to economic self-sufficiency (for example, improved literacy, adult education, and employability); and
- improved access to and utilization of community family support services.

In pursuit of its multiple program goals, Head Start has forged new relationships with agencies at the Federal, state and local levels and served as a catalyst in developing partnerships among human services agencies. The nature of such collaboration is an area of inquiry in terms of the impact of Head Start's efforts on policy and on the delivery of social programs and must be taken into account in research design and in the selection of independent variables.

5. Multiple indicators and methods should be employed in the measurement of important outcomes.

Evaluations should utilize, to the fullest extent possible, outcome indicators that are reflective of the generally understood goals of Head Start and that convey the program's important effects. These outcome measures should be readily understandable to parents, program staff, policymakers, and the general public. In addition to carefully selected standardized tests, outcome measures should include such straightforward indicators as

whether or not a child is at grade level, is placed in a special class, or does or does not have an undetected (or identified but untreated) medical condition.

Researchers should be mindful, however, that there are often complex dimensions of "simple" measures of the type recommended. For example, whether a child is retained in grade in the public schools is a relatively simple indicator. Why the child is retained in grade, the criteria by which this decision is made, and the implications for the child's future success in school may vary greatly within and across different school systems. Similarly, whether or not a child is in a special education class or experiencing "pull out" instruction is relatively easy to establish. What this means in terms of the child's placement in an appropriate educational environment that will best meet the child's learning and developmental needs is more complex.

In general, previous Head Start studies used norm-referenced tests either of I.Q. or achievement as the single method for measuring program outcomes. There has been well justified criticism of the use of I.Q. tests, particularly for minority children. However, there are other norm-referenced tests that are useful in determining the child's acquisition of certain skills. In fact, familiarity with "taking tests" and the particular skills involved in the test process can serve the child well in terms of future academic demands.

Norm-referenced tests should be only one of several methods for measuring child status. Indicators of a child's status, such as reading ability, number competence, or ability to function as a confident social participant in classroom and school processes are best arrived at through multiple methods, including observations, and ratings by teachers, parents, and peers.

Care should be taken in the selection of child outcome instruments to keep in mind that the ultimate purpose is to assess program effectiveness. With respect to school readiness and achievement, for example, the focus should be on the extent to which the influences of Head Start, school and the family combine to provide the child with opportunities to learn and function in an educational setting at an optimal level consistent with his or her ability.

The overall Head Start evaluation agenda should strive to balance the following elements: validity of outcome measures, ease of data collection for both researchers and program staff, multimethod assessment strategies, and an understanding of the underlying dynamics that the indicators purport to represent.

6. Data collection procedures and techniques must be valid and appropriate for the particular research question and the specific population.

Any norm-referenced instruments used with particular subpopulations must be valid for the subpopulation under consideration. Interviews and questionnaires administered to parents must take into account literacy level and linguistic usage of the respondents. In order to insure reliability and validity of the responses, these instruments may require special adaptations for different subpopulations. Of particular importance is attention to predictive validity. Reliable instruments may differ substantially in their capacity to predict the same outcome for different subpopulations. Therefore, most instruments will, of necessity, have to be pilot-tested prior to their use in research and evaluation studies.

All instruments should be administered individually to Head Start children. To optimize measurement comparability across years, individually administered tests also should be employed in later grade school followups.

7. Program variation must be explored while searching for explanations of differential outcomes.

There is no single active ingredient in Head Start that is the key to program outcomes. Local Head Start programs are complex organizational entities that interact with equally complex family and community ecologies. This calls for a combination of holistic research strategies (including organizational, case study, and ethnographic methodologies) together with multivariate statistical explorations involving natural variation, experimental, and quasi-experimental designs. Researchers should be alert to the possibilities that interaction of program attributes may be more important in accounting for outcomes than individual program attributes considered in isolation.

The following program variables are among those that are particularly important:

- staff characteristics and behaviors (including education, years of experience, credentials and certification, length and type of training, and knowledge of early childhood education and child development);
- classroom composition (group size and child-staff ratio) and, for home-based programs, family-home visitor case loads;
- nature and intensity of interactions among children and between children and staff;
- curricular strategy, including the extent to which the curriculum is well-planned and appropriately delivered;
- nature and intensity of parent involvement;
- staff-parent interaction;
- nature and frequency of home visiting and other family contacts;
- delivery of comprehensive services, including nature of linkages with health, nutrition, social and educational agencies;
- length and intensity of child's participation per day, week, and year;
- age at onset of intervention and number of years of child's and family's participation in the program;
- degree of program responsiveness to identified needs of participating children and families;
- extent and nature of flexibility exercised by the local program in tailoring its delivery system to specific circumstances and resources in the community;
- organizational climate;
- administrative and personnel issues (including staff compensation and turnover); and

- program auspices.

Head Start research should capitalize on the insights of prior and ongoing research in early childhood education, child development, and other related fields in exploring these variables. For example, organizational research is currently bringing new understandings to the functioning of public schools. Similar perspectives on examining Head Start programs as organizational entities can provide powerful research tools. Areas of inquiry include leadership, how decisions are made, the role of parent participation on policy councils, grantee-delegate agency linkages, the relationships of local programs and ACYF Regional Offices, and approaches to program implementation. Related administrative and personnel issues are worthy of priority attention, as suggested by recent findings in child care research showing the strong relationship between staff salaries and turnover and child outcomes.

In addition to variation across programs, variation within programs must be explored. Children and families vary considerably in the attributes with which they enter Head Start programs. These attributes will differ in their interactions with program characteristics. Therefore, even families with children in the same classrooms will vary in their Head Start experiences. Traditional methodology assumes a uniform treatment across families, at least among those with children in the same classroom. In studies which explore the reasons for differential effects, it is crucial to incorporate consideration of such variation in the initial design of the study.

8. Head Start research and evaluation studies can be greatly enhanced by building on the existing strengths of programs and program staffs.

The Panel felt strongly that researchers need to approach all studies with a focus on identifying the strengths of current programs and program staffs, rather than emphasizing deficits (for similar reasons that the approach to children and families should emphasize strengths rather than deficits). Research projects are most likely to succeed if researchers include program staff in all stages of the project, including the initial development of hypotheses. Collaboration between the research and program communities calls for joint planning with clearly defined roles and benefits for all parties.

Studies of existing programs are most likely to bear fruit if they involve a search for excellence both in overall programs and in particular strengths within programs. In addition, experimental designs to test program features will be most successful if those program "add ons" are considered by Head Start staff as new and exciting additions to their current programs. It also is important to provide increased funding to offset the costs of implementing the added features.

Although cooperative efforts between program and evaluation staff are essential, data collection procedures must include safeguards to insure that findings are not subject to the criticism of respondent bias. Such safeguards might include the use of ratings by independent observers not connected with a program. In addition, program staff should receive guarantees that negative findings will not be used by administrators to penalize the program or eliminate its staff. These guarantees are likely to reduce respondent bias and enhance the quality of the data.

Budgetary Considerations

The Panel's chief concern is that high quality research is conducted and used to make future decisions about programs that can profoundly affect the lives of poor children and their families. In addition to the recommended principles that undergird the research strategy discussed above, the following corollary principles involve budgetary considerations.

- High quality research is expensive. A smaller number of adequately funded studies is preferred to a larger number of inadequately funded efforts.

- The first year of all large scale and complex studies should be devoted to design and pilot testing. For all studies, there should be sufficient lead time prior to the formal data collection stage to permit careful pilot testing and the refining and fine-tuning of the design, measurement instruments and procedures.

RECOMMENDED RESEARCH DIRECTIONS

Thus far, the recommendations in this report have centered on the overall strategy and design issues embodied in a program of research and evaluation to address the questions: "What works best for whom?" and "What effects are maintained?" In keeping with this thrust, the Panel recommends a series of research directions that are important for building a future knowledge base. The specific studies that evolve from these recommendations should reflect both ACYF's priorities and the important research issues identified by the larger research community.

No distinction is made between evaluation and research with respect to these strategic design considerations. The common theme of the research directions set forth below is a series of studies to explore efficacy questions and, more broadly, to produce information to fill existing gaps in knowledge. The general thrust is toward models that help us to interpret differential outcomes and that should be incorporated into efficacy studies, whether termed research or evaluation projects (not a terribly useful distinction for these purposes).

The Panel recommends these four research directions for inclusion in the overall strategy:

1. **Longitudinal studies that seek to identify early and intermediate outcomes of a Head Start experience and that explore the interacting influences of preschool, family, and later schooling in mediating the long-term effects of child and family participation in Head Start.**

Head Start research should address the total flow of child and family outcomes during and subsequent to participation in the preschool program. In particular, the Panel urges placing a priority focus on the trajectory of the child and family outcomes following the Head Start experience. This would include short-term, medium-term, and, whenever feasible, long-term gains (and losses) attributable to Head Start and to the subsequent stream of influences associated with the family, public schools, and other relevant institutions that have significant effects on the child-family ecology.

Since the beginning of Head Start, many have been concerned that the experiences of Head Start graduates in the public schools might vitiate positive benefits of the program. Early findings of Head Start evaluations showed a regular pattern of decline in the first few years of school suggesting that the benefits of Head Start—as indexed by standardized school achievement tests—were largely gone by the third or fourth grade. Findings from the Perry Preschool Project and the larger group of studies included in the Consortium for Longitudinal Studies of graduates of university based intervention programs have shown a latent longer-term effect of children's experiences in the earlier years on a variety of other outcomes (for example, dropout rates, placements in special classes, and retention in grade). These results suggest that the early intervention may have had a significant effect on variables associated with children's later performance.

Long-term outcomes of social and economic importance produced by preschool programs is a pivotal issue that is likely to affect the Head Start policy climate for many years to come. The Panel is persuaded that the lasting benefits identified in some research-oriented preschool projects are likely to be genuine and not an artifact. However, policymakers and the general public should not be oversold that early education and intervention programs

such as Head Start, even when implemented in a high quality fashion, are some kind of panacea that succeed even in the absence of appropriate ongoing child and family support.

Little is known about the specific factors in the preschool program, within the family, in later school experiences, and in the total child and family ecology that sustain, reinforce and extend these benefits. Research that focuses on near-term and medium-term outcomes (at least through fourth, fifth, or sixth grade) as part of an effort to identify those program and family processes that are associated with lasting gains is particularly worthy of ACYF support. Such research should include short-term outcome measures that attempt to anticipate long-term effects and mid-term antecedents of such progress. Such studies of explanatory models should shed light on the mystery of long-term outcomes of high quality preschool programs. If feasible, research should be designed so that the option is available to extend at least a portion of the studies for a longer period, potentially until adulthood.

These studies also might include Head Start eligible children in other preschool settings or use an epidemiological approach which would identify a large low income population group at age 2 or 3 and longitudinally follow these children and families whether or not they have Head Start or other preschool experiences. An advantage of an epidemiological model is the possibility of picking up children with no type of formal preschool or child care experience. Foundations and other organizations, including the Department of Education and state and local education agencies, could be invited to collaborate in a series of longitudinal research subsidies targeted on this issue.

In addition to this major recommendation for a longitudinal exploration of explanatory models of lasting effects, other studies proposed below may include longitudinal aspects designed to accomplish other purposes.

2. Studies to identify quality ingredients in existing Head Start programs.

The variations within the Head Start program include issues of quality. Because Head Start provides such a natural laboratory, it is possible to explore issues of quality for either total programs or for particular components or variables in terms of "What works best for whom?" Case, ethnographic, and correlational studies would be particularly useful for formulating hypotheses about critical variables under different conditions. Second stage studies either could use experimental methods to test these hypotheses or study the prevalence of quality ingredients across Head Start programs.

A research area of particular importance is studies of parent involvement and family support. ACYF is giving increasing attention to these issues and this program focus on strategies to promote parent participation and strengthen families is the topic of a growing number of books and articles on low income and minority families. However, there has never been a major research or evaluation study solely focused on parent involvement and family support in Head Start. The Panel strongly believes that these topics warrant considerable research emphasis. Such a program of studies should take into account the types of parent involvement, the complexity of alternative family structures, perceived and/or actual family interaction processes, and sociocultural and language characteristics of subgroups of families. As in the case of other major research emphases described above, these studies can be pursued most fruitfully through a multimethod approach, involving a consortium of researchers.

In the early studies, Head Start should examine its administrative data bases for their usefulness in identifying either quality programs or programs that have high quality examples of the component or variable under consideration.

3. Studies of Head Start's emerging innovative program strategies.

The first two recommended research directions focused on the mainstream Head Start program as it has evolved over the past 25 years. ACYF is currently initiating a number of innovative program strategies. Some of these may begin as small scale demonstrations while others may be phased in quickly and incorporated in the nationwide effort. At the start of innovative projects, the demonstration and the evaluation should be planned simultaneously and interactively. Candidates for evaluation initiatives include promising Head Start program innovations such as family literacy, transition, and job training through the Family Support Act. Continuity between very early intervention programs and Head Start is another important research topic (for example, the Comprehensive Child Development Program, Parent Child Centers, and P. L. 99-457 activities for infants and toddlers with disabilities might be candidates for longitudinal inquiry).

4. Studies of special subpopulations of Head Start and other priority research and evaluation issues.

Special studies should target Head Start subpopulations that may not be included in sufficient numbers in the research and evaluation studies recommended above. For example, Hispanics, Native Americans, migrant farmworker families, Asians, children with disabilities, and geographically and socially isolated families have frequently been left out and have rarely been the principal focus of Head Start or other early childhood research and evaluation projects. The emphasis on subpopulations is intended to place greater priority on the inclusion of a wide diversity of subgroups in all studies; however, it may not always be feasible to include sufficient numbers of participants from small subgroups in studies that are intended to focus on other purposes.

Certain studies should be designed to focus specifically on the special needs and characteristics of very small Head Start subpopulations. Such studies should identify those research themes that are common to other Head Start populations and those that are specific to the particular subpopulation. In addition, these studies can identify exemplary program strategies that are responsive to the needs of particular groups.

This effort should include studies of special topics that may not be adequately dealt with in the studies identified above. Candidates for such special studies are evaluations of health services (including medical, dental, mental health, nutrition) and of special services to children with disabilities.

Another type of special study is an analysis of the Head Start intervention itself as an outcome variable. How have local Head Start programs tailored their intervention to respond to the special needs of groups in their community and acted to mobilize available community resources? The local grantee/delegate agency's approach to implementing the program performance standards would be viewed as a "first level outcome" worthy of exploration in its own right. The objective would be to explore the practical operational wisdom of local program administrators in using the flexibility that Head Start allows and encourages.

RECOMMENDATIONS FOR RESEARCH SUPPORT ACTIVITIES

The above two sections of this paper set forth general principles and a research strategy for Head Start inquiry and recommend four specific sets of studies for ACYF consideration. In order for this strategy and these recommendations to achieve the desired results over time—improving Head Start quality—it is essential to create an environment which nurtures research and evaluation. The following four research support activities are proposed to meet this need.

1. Establish an archive of significant Head Start data.

To be truly scientific, research must be cumulative in nature. The era of the one shot megastudy is over, or soon should be. A unifying theme of the Panel's recommendations is the importance of ACYF spearheading an interrelated series of studies in partnership with the larger research community. In order for this strategy to succeed, it is imperative to take steps to gain easy access to research findings. Related to this is the need to be able to access research data bases in electronic form in order to conduct secondary analyses and for other purposes.

The Panel recommends, therefore, that ACYF establish a Head Start data archive of significant studies, along with procedures for qualified researchers conveniently to access an electronic data file with appropriate confidentiality safeguards. The archive should include all Head Start studies sponsored by ACYF and by other funding sources. ACYF should specify archiving instructions and requirements at the time of funding Head Start research. Some additional resources may be necessary to acquire data from other research sponsors and to put them in a convenient format for ready access. If resources permit, funds might be made available to facilitate use of the archive by any investigator. The costs of the Head Start research archive would be modest; the benefits would be considerable.

As a first step toward meeting this objective, ACYF might consider establishing a work group or research council to discuss data archiving as part of the broader process of research planning and dissemination.

2. Develop a plan for Head Start measures identification and development.

As noted above, outcome measures must be identified that capture salient child and family outcomes and, where appropriate, community and institutional outcomes. ACYF should take the lead in the effort to identify marker variables and appropriate outcomes. Where child and family outcome measures do not exist in usable forms, initiatives should be considered to modify existing instruments or to develop new measures. In general, because the development of high quality measures is typically a complex, time-consuming, and costly undertaking, a new measures development effort should be undertaken only when a thorough review of existing instruments indicates a real need for developing a new measure for the purpose at hand.

There is a need for measures that focus on child social competence and family functioning in a two generation approach. The emphasis should be on relatively straightforward indicators of the child's developmental profile (including cognitive and language abilities, social functioning relevant to later success in school, and physical development), the family's vulnerability/strength profile, and parent-child interaction, as discussed earlier in this report. Measures might address questions such as: What are valid indices of the

reduction of risk factors that affect low income and minority children and families? Multimethod observational strategies are particularly promising.

As a first step, ACYF could host small conferences bringing together early intervention researchers who have developed or adapted measures with high promise of utility in Head Start research. Bringing together experienced researchers would be a way of sharing information about state-of-the-art measures. In view of the criticality of long-term outcomes, representatives of the major research-oriented preschool projects that have identified lasting effects should be included in the planning. Similarly, special efforts should be made to take into account issues related to the longitudinal measurement of change in child outcomes in various domains over time. Since it is expected that measures identification and development will involve extensive collaboration between researchers and Head Start programs, representatives of local programs also should be included in the conferences.

ACYF can ask researchers to draft monographs focused on particular outcome domains either prior to or following these planning conferences. The following are examples of some of the activities that may flow from the measures conferences:

- Funding by ACYF of some projects to develop new measures;
- Implementation of projects to refine measures that show special promise (for example, adaptation of straightforward measures, measures for different ethnic groups, measures for children of different ages and developmental levels);
- Identification and/or development of a core set of marker variables that could be used in common across many Head Start research and evaluation studies in order to gather comparable data and to support meta-analysis and other forms of secondary analysis;
- Identification of computer software packages that facilitate the analysis of complex areas, such as longitudinal measurement of change;
- Establishment of panels to advise on future measures activities; and
- Establishment of a clearinghouse on early intervention measures.

3. Develop and implement a strategy for Head Start research and evaluation capacity building.

Capacity building is necessary to establish the institutional mechanisms and collaboration between Head Start and the overall research community that are essential to carrying out the strategy outlined above. Capacity building refers to creation of the infrastructure necessary to implement the research strategy proposed by the Panel. Some capacity building can be accomplished within the framework of specific studies (for example, using the consortium technique of conducting several small substudies within the umbrella of one larger project). Another approach is through joint or parallel funding with other sources (for example, foundations or research institutes). Additional capacity building efforts should be considered by ACYF beyond what occurs in individual research projects.

ACYF might establish an ongoing institutional process or processes to link in-house research and evaluation planning and management to the broader research community. Possible steps could be to host workshops bringing together researchers and early intervention program specialists to consider the latest thinking and research tools and to commission monographs dealing with critical issues of research and evaluation methodology. Other steps could include assistance in obtaining software programs for data analysis.

Monographs should include appropriate uses of experimental and quasi-experimental methods, multimethod observational techniques, and other approaches. The monographs should identify the types of studies and issues for which particular methodologies are suited and the pros and cons of each approach in terms of criteria such as clarity of causal inference, cost, timing, practicability, burden on grantees and families, and ethical considerations.

One mechanism for developing monographs would be to support graduate students in their studies for work on priority issues identified by ACYF. Such a plan is already being considered within the agency. Monographs that have greater time urgency or that require particular expertise could be commissioned from established researchers.

4. Utilize information from existing Head Start administrative data bases for research and evaluation purposes.

In addition to their utility for program management, monitoring, and other operational purposes, Head Start administrative data bases can play useful roles in research and evaluation. Existing Head Start administrative data bases such as the Program Information Report (PIR) and the Head Start Cost System (HSCOST), and the forthcoming child and family data base should be incorporated in the data archive. PIR data can prove useful in drawing samples of grantees and delegate agencies for research studies. These data may also serve as proxy indicators for program outcomes or for program processes and variables believed to be associated with child and family outcomes. As progress is made toward identifying a set of marker variables, these variables should be reviewed and incorporated in administrative data bases whenever feasible.

CONCLUSION

In its 25 years of existence, Head Start has faced increasingly complex issues in meeting the needs of low income children and families. Although the importance of Head Start is well recognized, providing services that meet the needs of increasingly diverse populations will continue to be a major challenge. There is a need for reliable and valid information about what works, why it works, for whom it works and under what conditions it works. The answers to these questions, based on the findings of quality research and evaluation studies, can be a potent force in preserving and promoting the well-being of this country's most important resource, its children.

Afterword

The above paper, **HEAD START RESEARCH AND EVALUATION:** ***A Blueprint for the Future***, contains the recommendations of the Advisory Panel for the Head Start Evaluation Design Project. The project was conducted by Collins Management Consulting, Inc. (CMC) under contract to the Head Start Bureau of the Administration for Children, Youth and Families (ACYF). Additional information, including a technical supplement on research methodology, is contained in the **FINAL REPORT OF THE HEAD START EVALUATION DESIGN PROJECT**, published separately.

CMC wishes to express our appreciation to the members of the Panel for their diligent and imaginative efforts to produce a document designed to improve the future knowledge base for Head Start and other programs that serve low income children and their families. In addition to the regular Panelists listed in the back of this paper who produced this report, we would like to recognize the contributions of three special category Panelists, listed below, who attended the first of four Panel meetings and provided valuable insights concerning state government, child care and the public schools.

We would also like to thank ACYF Commissioner, Wade F. Horn, and Associate Commissioner for Head Start, Clennie Murphy, Jr., for their support for the project and their active participation in Panel meetings. Dr. Horn has consistently expressed his commitment to high quality Head Start research and evaluation. In addition, we would like to thank other staff of the Department of Health and Human Services and the Department of Education who attended Panel meetings and provided information to the project.

On behalf of the Panel and the CMC project team, we would like to extend special recognition to our Government Project Officer, Dr. Esther Kresh, for her dedicated leadership and thoughtful technical direction.

Finally, I would like to acknowledge the assistance of Derry Koralek in editing the Panel's report.

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